

REMARKS

I. Status of the Claims

Claims 16-37 are pending. Solely in an effort to advance prosecution, claims 16 and 35-37 have been amended to more explicitly recite that the composition is in the form of a gel. No new matter has been added, and support for this amendment can be found throughout the application as originally filed, e.g., at page 3, line 20 - page 4, line 2; page 9, lines 16-18; and Examples 2-4.

Applicant respectfully requests that this Amendment under 37 C.F.R. § 1.116 be entered by the Examiner, placing claims 16-37 in condition for allowance. Applicant submits that the proposed amendments of claims 16 and 35-37 do not raise new issues or necessitate the undertaking of any additional search of the art by the Examiner, since all of the elements and their relationships claimed were either earlier claimed or inherent in the claims as examined. Therefore, this Amendment should allow for immediate action by the Examiner.

Applicant also submits that the entry of the Amendment would place the application in better form for appeal, should the Examiner dispute the patentability of the pending claims.

II. Rejection Under Judicially Created Obviousness-Type Double-Patenting

In the Final Office Action, the Office maintains two of the double-patenting rejections of record. First, all pending claims are rejected as obvious over claims 1-30 of U.S. Patent No. 6,080,392 to Dupuis ("Dupuis I"). Second, all pending claims are rejected as obvious over the claims of U.S. Patent No. 6,383,472 to Dupuis et al. ("Dupuis II"). While Applicant disagrees, the claims have been amended, solely in an

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effort to advance prosecution, to recite explicitly that the composition is in the form of a gel. This amendment obviates these rejections and places the claims in condition for allowance.

Both Dupuis I and Dupuis II claim, *inter alia*, a composition pressurized as an aerosol in the presence of a propellant and capable of forming a mousse. See, e.g., Dupuis I at claim 1; see, e.g., Dupuis II at claim 1. The present claims as amended are limited to a gel and not a mousse.¹ Thus, the claims as amended are now patentably distinct both over Dupuis I and Dupuis II, at least for the purpose of obviousness-type double patenting, because the additional recitation is not claimed by either Dupuis I or Dupuis II. Furthermore, one of ordinary skill in the art would not have been motivated to modify either Dupuis I or Dupuis II with a reasonable expectation of successfully forming a composition in the form of a gel. Accordingly, Applicant respectfully requests that the double-patenting rejections be withdrawn.

III. Rejections Under 35 U.S.C. § 112, Second Paragraph

In the Final Office Action, the Office maintains two points of rejection of claims 21, 22, 26, and 29 under 35 U.S.C. § 112, second paragraph. In particular, the Office alleges that one of ordinary skill in the art would not understand either (i) the phrase "chemically, enzymatically or microbiologically modified soluble starch" or (ii) the term "derivatives." Applicant disagrees for at least the reasons set forth below.

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¹ Applicant notes that claim 35 was already drawn to a "leave-in haircare gel or styling gel." Even so, Applicant has also amended this claim to conform with the other claims.

A. "Chemically, Enzymatically or Microbiologically Modified Soluble Starch"

With respect to this phrase, the Office erroneously equates breadth with indefiniteness, stating "one of ordinary skill in the art would not be able to ascertain what compounds are encompassed by this phrase, as this phrase encompasses an innumerable amount of chemical possibilities and hence, compounds." Final Office Action at 3. Contrary to the Office's assertion, however, the number of compounds encompassed by "chemically, enzymatically or microbiologically modified soluble starch" is irrelevant under § 112, second paragraph. See M.P.E.P. § 2173.04. Because indefiniteness is not determined by breadth, what is relevant is "whether one of ordinary skill in the art would understand the bounds of the claim when read in light of the specification." *Exxon Research & Eng'g Co. v. United States*, 265 F.3d 1371, 1375 (Fed. Cir. 2001). Here, the specification makes clear that the phrase means a starch, e.g., a starch extracted from natural sources, "which has been chemically, enzymatically, or microbiologically modified so as to be soluble in water." Specification at 6, lines 9-15. Thus, this unambiguous phrase means exactly what its plain meaning would imply: a starch modified chemically, enzymatically, or microbiologically to be water-soluble. Accordingly, the claim is not indefinite, and Applicant requests withdrawal of this point of rejection.

B. "Derivatives"

With respect to the term "derivatives," the Office apparently takes the position that one of ordinary skill in the art would not understand the term. But whether one of ordinary skill in the art would "be apprised of all the chemical modifications encompassed by this term" is not the proper inquiry. Final Office Action at 3. Rather,

the proper inquiry is whether one of ordinary skill in the art would *understand* the term. The Federal Circuit has held that “[i]f the meaning is discernible, even though the task may be formidable and the conclusion may be one over which reasonable persons will disagree, . . . the claim [is] sufficiently clear to avoid invalidity on indefiniteness grounds.” *Exxon Research*, 265 F.3d at 1375. Applicant submits that “derivatives” is a quite common term used by those having ordinary skill in the chemical arts, and thus does not even come close to having a meaning “over which reasonable persons would disagree.” Indeed, the claim need not explicitly recite all potential chemical modifications encompassed by “derivatives”, because one of ordinary skill in the art would understand that a claimed derivative possesses functional properties similar to those of the claimed parent compound even though the structure of a derivative may vary due to small variations in the substituents. The meaning of “derivative,” therefore, is discernible, and the term does not render the claims indefinite. Accordingly, Applicant respectfully requests withdrawal of this point of rejection as well.

IV. Rejection Under 35 U.S.C. § 103

The Office maintains the rejection of claims 16-37 under 35 U.S.C. § 103(a) as obvious over Dupuis I in view of U.S. Patent No. 4,155,892 to Emmons et al. (“Emmons”) and further in view of U.S. Patent No. 5,385,729 to Prencipe et al. (“Prencipe”). Applicant disagrees, because the Office has failed to present a *prima facie* case of obviousness. In particular, the references do not teach or suggest a composition comprising at least one nonionic amphiphilic associative polyurethane corresponding to formula (I), wherein one of the end groups is a C₈-C₁₈ alkyl group and

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the other is a C₁-C₆ alkyl group, and further wherein the composition is in the form of a gel (as required by the amended claims).

With respect to obviousness in general, the Federal Circuit has admonished:

Measuring a claimed invention against the standard established by section 103 requires the oft-difficult but critical step of casting the mind back to the time of invention, to consider the thinking of one of ordinary skill in the art, guided only by the prior art references and the then-accepted wisdom in the field.... [T]he best defense against the subtle but powerful attraction of a hindsight-based obviousness analysis is rigorous application of the requirement[s] for [a *prima facie* case of obviousness].

In re Dembiczak, 175 F.3d 994, 999 (Fed. Cir. 1999). The requirements for a *prima facie* case of obviousness include the requirement that there be some suggestion or motivation in the cited references, or in the knowledge generally available to one of ordinary skill in the art, to combine reference teachings. See M.P.E.P. § 2143. Furthermore, the evidence of this motivation to combine must be "clear and particular." *Dembiczak*, 175 F.3d at 999. In this case, the Office has failed to set forth proper reasoning why one of ordinary skill in the art would have been motivated to modify the references to arrive at the claimed composition.

Dupuis I teaches "a cosmetic composition pressurized as an aerosol in the presence of a propellant and capable of forming a mousse, comprising, in a cosmetically acceptable medium, at least one associative polyurethane and at least one anionic polymer." Dupuis I, col. 1, lines 5-9. Dupuis I makes clear that its compositions relate solely to compositions pressurized in an aerosol device so that they form mousses. See, e.g., Dupuis I, col. 1, lines 5-11 and 57-67; col. 2, lines 1-15; Examples 1-7; Claim 1. Dupuis I does not teach or suggest a composition in the form of a gel, as required by the claims as amended.

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Furthermore, Dupuis I teaches a polymer having end groups R and R'. Dupuis discloses: "R and R', which may be identical or different, are C₈-C₁₈ hydrocarbon radicals." Dupuis I, col. 4, lines 66-67. The pending claims, of course, require end groups, such that "one of the radicals R₁ and R₂ is an alkyl group having 8 to 18 carbons and the other group is an alkyl group having 1 to 6 carbons." See, e.g., claim 16. As implicitly admitted by the Office, Dupuis I does not disclose or suggest one end group being an alkyl group having less than 8 carbons.

The Office attempts to overcome the deficiencies of Dupuis I by resorting to Emmons.² In the Final Office Action, the Office merely responds to Applicant's previous arguments regarding lack of motivation to combine, alleging: "Emmons teach[es] that by altering the length of the hydrocarbon chains in the polyurethane, a preferred thickness of a composition can be obtained." Final Office Action at 4. The Office further alleges: "Emmons is relied upon for its teaching that altering carbon chain length of polyurethane is known, as are chain lengths of less than eight carbons." *Id.* at 5. While Applicant agrees that alkyls having chain lengths less than eight carbons are known, Applicant disagrees that Emmons teaches modifying the composition of Dupuis I to obtain a composition as claimed.

Applicant submits that Emmons does not suggest what is required by the claims, i.e., "one of the radicals R₁ and R₂ is an alkyl group having 8 to 18 carbons and the other group is an alkyl group having 1 to 6 carbons." See, e.g., claim 16. Applicant has thoroughly searched the reference for the suggestion identified by the Office but has not

² As noted above, the Office also allegedly rejects the claims in view of Prencipe. The Final Office Action, however, does not address either Prencipe or Applicant's previous

been able to find it. At best, the reference discloses: “[T]he polymers will provide good thickening if the polyether segments have molecular weights of at least 1500 (preferably 3,000-20,000), the polymers contain, on the average, at least three hydrophobic groups and at least two water soluble polyether segments lining the hydrophobes, the sum of the carbon atoms in the hydrophobic groups being at least 20, preferably at least 30, and the total molecular weight is about 10,000-200,000, preferably 12,000-15,000.” Emmons, col. 7, lines 6-14. But that portion simply does not suggest modifying the chain lengths of Dupuis I, such that one end group is an alkyl having 1 to 6 carbons and the other end group is an alkyl having 8 to 18 carbons. Rather, the portion merely discusses various interacting factors that affect the compositions disclosed by Emmons. Because the Office does not specify where the reference discloses modifying the composition of Dupuis I, it has not provided the “clear and particular” evidence required to support the combination. See *Dembiczak*, 175 F.3d at 999. The Office, therefore, cannot maintain that a person of ordinary skill in the art, having read Emmons’s disclosure, would have been motivated to reduce the length of only one end chain of a compound disclosed in Dupuis I.

Furthermore, the claims as amended explicitly recite that the composition is in the form of a gel. Dupuis I, as discussed above in reference to the double-patenting rejection, does not disclose a composition in the form of a gel. While Emmons appears to disclose that its thickeners may form a “ringing” gel, it provides no motivation to change the composition of Dupuis I from the form of a mousse into the form of a gel.

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arguments regarding Prencipe. Clarification as to the status of Prencipe as a reference is respectfully requested.

Finally, Applicant notes that Prencipe discloses compositions in the form of gels. Prencipe, col. 2, lines 23-26. Regardless, there is no motivation to change the compositions of Dupuis I from mousses into gels while simultaneously changing the end groups of compounds within the compositions. As noted in the present specification, "The thickening and/or gelation of aqueous media with polymers has been an important subject of cosmetic research for a long time." Page 1, lines 9-11. Accordingly, the disclosure of gels, which are well-known, without a concomitant suggestion or motivation to combine or modify the compositions of Dupuis I, does not render the pending claims obvious. See, e.g., M.P.E.P. § 2142. In light of the above, Applicant respectfully requests that the rejection under 35 U.S.C. § 103 be withdrawn.

V. Conclusion

In view of the foregoing remarks, Applicant submits that this claimed invention, as amended, is patentable over the prior art of record. Applicant therefore requests the entry of this Amendment, the Examiner's reconsideration and reexamination of the application, and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to Deposit Account No. 06-0916.

Respectfully submitted,

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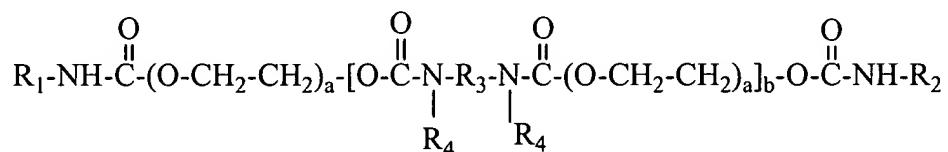
APPENDIX TO AMENDMENT OF FEBRUARY 13, 2003

Version with Markings to Show Changes Made

Amendments to the Claims

16. (Twice Amended) A cosmetic composition comprising, in a cosmetically acceptable medium,

(A) at least one nonionic amphiphilic associative polyurethane corresponding to formula (I):



in which

one of the radicals R_1 and R_2 is an alkyl group having 8 to 18 carbons and the other group is an alkyl group having 1 to 6 carbons,

R_3 is a hydrocarbon radical having from 4 to 36 carbons,

R_4 is chosen from hydrogen and C₁-C₆ alkyl radicals,

a ranges, independently, from 90 to 600, and

b ranges from 1 to 4, and

(B) at least one anionic polymer comprising at least one fatty-chain monomer unit.

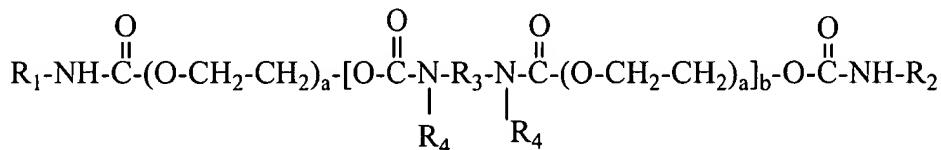
wherein the composition is in the form of a gel.

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35. (Twice Amended) A leave-in haircare gel or styling gel comprising, in a
cosmetically acceptable medium:

(A) at least one nonionic amphiphilic associative polyurethane corresponding to formula (I):



in which

one of the radicals R_1 and R_2 is an alkyl group having 8 to 18 carbons and the other group is an alkyl group having 1 to 6 carbons,

R_3 is a hydrocarbon radical having from 4 to 36 carbons,

R_4 is chosen from hydrogen and C₁-C₆ alkyl radicals,

a ranges, independently, from 90 to 600, and

b ranges from 1 to 4, and

(B) at least one anionic

(B) at least one anionic polymer comprising at least one fatty-chain monomer unit₁

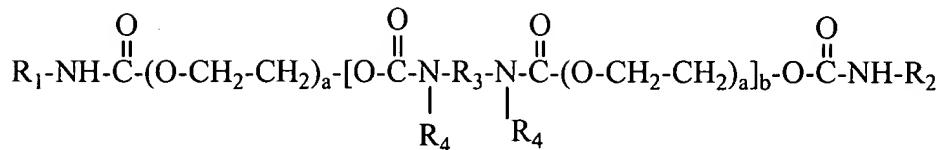
wherein the leave-in haircare gel or styling gel is in the form of a gel.

36. (Twice Amended) A process of thickening a cosmetic composition comprising adding to said composition:

(A) at least one nonionic amphiphilic associative polyurethane corresponding to formula (I):

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in which

one of the radicals R_1 and R_2 is an alkyl group having 8 to 18 carbons and the other group is an alkyl group having 1 to 6 carbons,
 R_3 is a hydrocarbon radical having from 4 to 36 carbons,
 R_4 is a hydrogen atom or a C_1-C_6 alkyl radical,
 a ranges, independently, from 90 to 600, and
 b is from 1 to 4, and

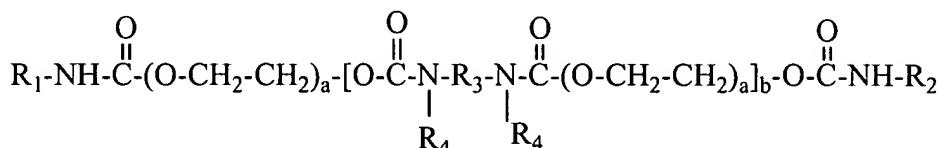
(B) at least one anionic polymer comprising at least one fatty-chain monomer unit

wherein (A) and (B) are added in a combined amount effective to thicken said composition, and

wherein the composition is in the form of a gel.

37. (Twice Amended) A process for treating hair comprising applying to said hair composition comprising, in a cosmetically acceptable medium:

(A) at least one nonionic amphiphilic associative polyurethane corresponding to formula (I):



in which

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one of the radicals R₁ and R₂ is an alkyl group having 8 to 18 carbons and the other group is an alkyl group having 1 to 6 carbons,

R₃ is a hydrocarbon radical having from 4 to 36 carbons,

R₄ is chosen from hydrogen and C₁-C₆ alkyl radicals,

a ranges, independently, from 90 to 600, and

b ranges from 1 to 4, and

(B) at least one anionic polymer comprising at least one fatty-chain monomer unit

and drying the hair without rinsing said composition from the hair,
wherein the composition is in the form of a gel.

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